CONTENTS

Symposium on Health Effects of Drinking Water Disinfectants and Disinfectant By-Products

J. A. Cotruvo. Introduction: evaluating the benefits and potential risks of disinfectants in drinking water treatment 1

E. W. Akin, J. C. Hoff and E. C. Lippy. Waterborne outbreak control: which disinfectant? 7

D. Couri, M. S. Abdel-Rahman and R. J. Bull. Toxicological effects of chlorine dioxide, chlorite and chlorate 13

M. S. Abdel-Rahman, D. Couri and R. J. Bull. Metabolism and pharmacokinetics of alternate drinking water disinfectants 19

D. Couri, C. H. Miller, Jr., R. J. Bull, J. M. Delphia and E. M. Ammar. Assessment of maternal toxicity, embryotoxicity and teratogenic potential of sodium chlorite in Sprague-Dawley rats 25

G. S. Moore and E. J. Calabrese. Toxicological effects of chlorite in the mouse 31

R. W. Tuthill, R. A. Giusti, G. S. Moore and E. J. Calabrese. Health effects among newborns after prenatal exposure to ClO_2-disinfected drinking water 39

J. P. Bercz, L. Jones, L. Garner, D. Murray, D. A. Ludwig and J. Boston. Subchronic toxicity of chlorine dioxide and related compounds in drinking water in the nonhuman primate 47

J. R. Lubbers, S. Chauan, and J. R. Bianchine. Controlled clinical evaluations of chlorine dioxide, chlorite and chlorate in man 57

J. D. Johnson, R. F. Christman, D. L. Norwood and D. S. Millington. Reaction products of aquatic humic substances with chlorine 63

A. R. Oyler, R. J. Liukkonen, M. K. Lukasewycz, D. A. Cox, D. A. Peake and R. M. Carlson. Implications of treating water containing polynuclear aromatic hydrocarbons with chlorine: a gas chromatographic-mass spectrometric study 73

C. D. Watts, B. Crathrone, M. Fielding and S. D. Killops. Nonvolatile organic compounds in treated waters 87

A. A. Stevens. Reaction products of chlorine dioxide 101

F. E. Scully, Jr. and M. A. Bempong. Organic *N*-chloramines: chemistry and toxicology 111

A. E. Munson, L. E. Sain, V. M. Sanders, B. M. Kauffmann, K. L. White, Jr., D. G. Page, D. W. Barnes and J. F. Borzelleca. Toxicology of organic drinking water contaminants: trichloromethane, bromodichloromethane, dibromochloromethane and tribromomethane 117

R. L. Balster and J. F. Borzelleca. Behavioral toxicity of trihalomethane contaminants of drinking water in mice 127

J. H. Exon and L. D. Koller. Effects of transplacental exposure to chlorinated phenols 137

T. A. Jorgenson, C. J. Rushbrook and D. C. L. Jones. Dose-response study of chloroform carcinogenesis in the mouse and rat: status report 141

M. A. Pereira, L.-H. C. Lin, H. M. Lippitt and S. L. Herren. Trihalomethanes as initiators and promoters of carcinogenesis 151

R. E. Savage, Jr., C. Westrich, C. Guion and M. A. Pereira. Chloroform induction of ornithine decarboxylase activity in rats 157

R. H. Reitz, T. R. Fox and J. F. Quast. Mechanistic considerations for carcinogenic risk estimation: chloroform 163

M. S. Gottlieb and J. K. Carr. Case-control cancer mortality study and chlorination of drinking water in Louisiana 169

M. S. Kanarek and T. B. Young. Drinking water treatment and risk of cancer death in Wisconsin 179

K. P. Cantor. Epidemiological evidence of carcinogenicity of chlorinated organics in drinking water 187

B. C. J. Zoeteman, J. Hrubec, E. de Greef and H. J. Kool. Mutagenic activity associated with by-products of drinking water disinfection by chlorine, chlorine dioxide, ozone and UV-irradiation 197

H. J. Kool, C. F. van Kreijl, E. de Greef and H. J. van Kranen. Presence, introduction and removal of mutagenic activity during the preparation of drinking water in the Netherlands 207

R. J. Bull, M. Robinson, J. R. Meier and J. Stober. Use of biological assay systems to assess the relative carcinogenic hazards of disinfection by-products 215

Session summaries and discussion 229

Announcements 243

Published Volumes of EHP 245

Instructions to Authors 247